

Pharmaceutical Chronicle

September 2021



Congratulations and happy retirement to Dr. James Knittel

WNE College of Pharmacy and Health Sciences wishes Dr. James (Jim) Knittel a happy retirement! Dr. Knittel's academic career spans nearly 40 years, starting as an Assistant Professor at Rutgers, followed by a 24-year stint at the University of Cincinnati before coming to WNE as Professor and Founding Chair of the Department of Pharmaceutical and Administrative Sciences 12 years ago. He served the College as Department Chair for eight years and then as Interim Dean for the 2019-2020 academic year. Along the way, Dr. Knittel built a nationally recognized career as a peptide chemist, mentoring 20 grad students/research techs with almost two million in grant funding as a PI or Co-PI, winning multiple teaching and leadership awards for excellence. He'll leave our College and University a better place than he found it and we wish him all the best in his well-deserved retirement!



A very warm welcome to Dr. Cassia Mizuno

Dr. Mizuno joined the WNE College of Pharmacy and Health Sciences in July of 2021 as an Associate Professor in the Department of Pharmaceutical Sciences. Dr. Mizuno earned her BS in Pharmacy and Biochemistry at the University of São Paulo, Brazil. In 2006, she received her PhD in Medicinal

Chemistry from the University of Mississippi, followed by her postdoctoral training at the USDA-ARS, where she worked on the discovery of natural product-based anticancer agents and environmentally friendly pesticides.

Dr. Mizuno research interests include modification of natural products in the search of compounds with, but not limited to anti-cancer, antimicrobial, anti-parasitic, and analgesic activities.



Dr. Natalia Shcherbakova serves on review panel for the National Science Foundation.

In spring 2020, Dr. Natalia Shcherbakova was invited to serve as a panel reviewer on National Science Foundation's Small Business Innovation Research and Small Business Technology Transfer Programs. Thus far, Dr. Shcherbakova has served on over half a dozen panels and reviewed proposals focused on Devices for Biomedical applications; COVID-19; Pharmaceutical Tech Drug Discovery, Delivery, and Manufacturing; Diagnostics; and Digital Health. The expertise of panel reviewers spans a broad range of disciplines including biomedical engineering, chemical and biological sciences, and other fields. "It has been an enriching experience to contribute to the next generation healthcare discoveries and meet accomplished researchers from across the country."

far, Dr. Shcherbakova has served on over half a dozen panels and reviewed proposals focused on Devices for Biomedical applications; COVID-19; Pharmaceutical Tech Drug Discovery, Delivery, and Manufacturing; Diagnostics; and Digital Health. The expertise of panel reviewers spans a broad range of disciplines including biomedical engineering, chemical and biological sciences, and other fields. "It has been an enriching experience to contribute to the next generation healthcare discoveries and meet accomplished researchers from across the country."



Dr. Gladys Ekong offers Prevent T2 Lifestyle Change Program

Have you checked your risk for type 2 diabetes? Did you know that one in three American adults has pre-diabetes? Community members at Western New England University are taking serious steps to prevent type 2 diabetes using the PreventT2 Lifestyle

change program offered by Dr. Gladys Ekong, a trained lifestyle coach. The one-year program is offered in collaboration with Dr. Kam Cappocia at the WNE College of Pharmacy and Health Sciences & Big Y Foods Inc. Consultation and Wellness Center. Participants are learning skills to reduce their weight, manage stress, and increase physical activity. The program's group setting provides a supportive environment with people who are facing similar challenges and trying to make the same changes. Together, participants celebrate their successes and find ways to overcome obstacles. PreventT2 is part of the National Diabetes Prevention Program, led by the Centers for Disease Control and Prevention (CDC).

Many people with prediabetes can be diagnosed with type 2 diabetes within five years, so the need for prevention is a top priority. The evidence-based CDC program is proven to prevent or delay the onset of type 2 diabetes. The primary features of the program include:

- A CDC-approved curriculum
- Maximum convenience using a virtual or in-person session
- Peer support and long-lasting results
- A free program supported by the WNE College of Pharmacy and Health Sciences.

To learn more about the program, contact the Wellness and Consultation Center (413-796-2000 or wellness.center@wne.edu). For eligibility and self-referral, use the link wneop.az1.qualtrics.com/jfe/form/SV_6lhcc1EETMSO2uG



Drs. Daniel Kennedy and Clinton Mathias develop two patents

Quercis Pharma AG, a private, clinical stage biopharmaceutical company, has signed a worldwide license agreement with Western New England University for the exclusive rights to develop and market Zafirlukast in a variety of medical indications. Specific terms of the agreement have not been disclosed.



Zafirlukast is in a class of medications known as leukotriene receptor antagonists (LTRAs) that work by blocking the action of certain natural substances that cause swelling and tightening of the airways. Zafirlukast (Accolate®) was originally approved by the U.S. Food and Drug Administration in 1996

for the prophylaxis and chronic treatment of asthma in adults and children 12 years of age or older. As of March 2018, the product is no longer marketed for this indication.

Zafirlukast has also been shown to be a novel, potent, broad-spectrum thiol isomerase (TI) inhibitor, with wide ranging effects on platelet function, thrombosis and integrin-mediated cell migration.

The research discoveries in these patents were developed in the laboratories of Chair and Professor of Pharmacology at WNE, Daniel Kennedy, PhD, in cooperation with Jonathan Gibbins, PhD, at University of Reading, UK.

“We are honored to partner with Quercis to continue the clinical development of Zafirlukast as an antithrombotic agent,” stated Dr. Kennedy. “Our partnership is another testament to the international impact of our science and research occurring within the College of Pharmacy and Health Sciences. We have worked tirelessly over the past eight years with our partners to bring this discovery through the drug development process, culminating in a Phase II clinical trial, and are ecstatic to partner with Quercis to continue our research.”

Quercis Pharma AG plans to evaluate Zafirlukast in a variety of indications both as a single drug therapy and in combination with

the company’s lead antithrombotic product candidate, Kinisoquin, which in a Phase 2 clinical trial demonstrated evidence of reduced levels of key markers of coagulation without producing clotting or major bleeding events.

“We are looking forward to continuing to collaborate with WNE to further elucidate Zafirlukast’s antithrombotic activity and to advancing Zafirlukast in a number of important medical indications, including COVID-19 and Amyotrophic Lateral Sclerosis (ALS),” stated Stefan Wohlfeil, MD, Chief Medical Officer of Quercis Pharma.

“We believe the synergistic mechanisms of action between Zafirlukast and isoquercetin have the potential to shut down certain upstream effects of overactive protein expression, which damages endothelial cells and releases Protein disulfide isomerase (PDI) into the bloodstream, while also providing key inhibitors to the downstream effects of P-selectin and PDI. This could be a powerful combination therapy for a number of diseases where multimodal mechanisms are needed,” adds Wohlfeil.

Also included in the license agreement is a second patent developed in the laboratories of Dr. Kennedy and Professor of Pharmacology at WNE, Clinton Mathias, PhD. “The interest of Quercis Pharma in the patents produced at WNE are yet another example of how the College of Pharmacy and Health Sciences is continuing to evolve as both a leader in Pharmacy and Health Sciences education and innovative applied research in collaboration with industry partners,” said John M. Pezzuto, PhD, DSc, Dean of the College of Pharmacy and Health Sciences at WNE. “The efforts of Professors Kennedy and Mathias, combined with the resources planned to be provided by Quercis Pharma, are aimed at giving healthcare providers important new therapeutics in the treatment of a broad range respiratory and neurological illness.”

The College of Pharmacy and Health Sciences educates future-focused leaders in the health and wellness fields through innovative doctoral, master’s, and dual degree programs. Collaborative faculty research, including research with students, is a hallmark of the masters and doctoral experience.

“This license, along with our recently announced license agreement with Beth Israel Deaconess Medical Center for patents related to key thrombotic inhibitor pathways for isoquercetin, expands our development pipeline with a synergistic product candidate that alone and in combination with our lead drug can address a multitude of unmet medical needs in markets with large opportunities,” noted Thomas Lines, founder and board member of Quercis Pharma. “Importantly, it strengthens our patent portfolio, supports the creation of new intellectual property and creates value across the pipeline.”

“Innovation and discovery are at the very core of the entrepreneurial mindset we espouse at Western New England University,” said Robert E. Johnson, President of WNE. “Our partnership with Quercis Pharma serves to expedite the process from discovery to treatment with the potential to save lives. There can be no better example and inspiration for our students than to witness that process unfold through the efforts of Dr. Kennedy and Dr. Mathias.”